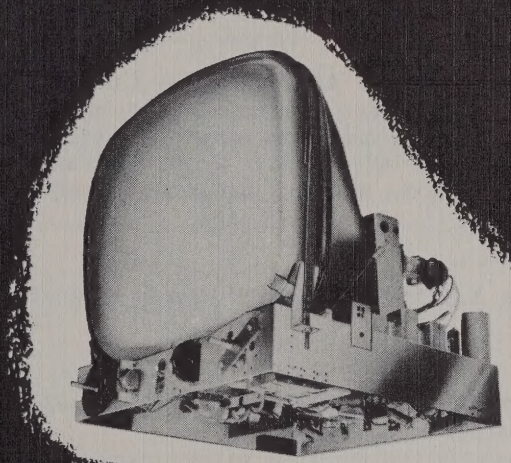
20" PLASTIC
TABLE MODEL
1075

service data

CHASSIS DATA

ANTENNA	EXTERNAL OR BUILT IN SILVER VORTEX
ANTENNA INPUT IMPEDANCE	300 OHMS
TUNING	12 CHANNELS, 2-13
POWER SOURCE	110-120 V, 60 CYCLES
POWER INPUT	145 WATTS
TUBES	18, INCLUDING PIX TUBE
SPEAKER	6½" ELECTRODYNAMIC
PIX CARRIER I-F	26.25 MC.
SOUND CARRIER I-F	21.75 MC.
INTERCARRIER SOUND	4.5 MC.
CABINET	PLASTIC
PIX TUBE	20"
TUNER	1E1492 PENTODE



20" PLASTIC
TABLE MODEL
1075
(with optional base)

hallicrafters

94X1079-1
1152

TUBE COMPLEMENT

V-1	6BZ7 or 6BQ7 . . . . . R-F AMPLIFIER	V-108	6SN7GT . . . . . HORIZONTAL OSCILLATOR
V-2	6J6 . . . . . OSCILLATOR/MIXER	V-109	25BQ6GT . . . . . HORIZONTAL OUTPUT
V-101	6CB6 . . . . . FIRST I-F AMPLIFIER	V-110	12AX4 . . . . . DAMPER
V-102	6CB6 . . . . . SECOND I-F AMPLIFIER	V-111	1B3GT . . . . . HIGH VOLTAGE RECTIFIER
V-103	6CB6 . . . . . THIRD I-F AMPLIFIER	V-112	6AU6 . . . . . SOUND I-F AMPLIFIER
V-104	6AH6 . . . . . VIDEO AMPLIFIER	V-113	6AL5 . . . . . RATIO DETECTOR
V-105	12SN7GT . . . . . SYNC CLIPPER	V-114	6C4 . . . . . AUDIO AMPLIFIER
V-106	12BH7 . . . . . VERT. OSC. & OUTPUT	V-115	25L6GT/G. . . . . AUDIO OUTPUT AMPLIFIER
V-107	6AL5 . . . . . HORIZONTAL A.F.C.	V-116	20HP4 . . . . . PICTURE TUBE

SERVICE ADJUSTMENTS

Note: The controls whose adjustment is outlined below are all located on the rear apron of the chassis with the exception of the centering device which is located on the neck of the picture tube. The sequence of "SERVICE ADJUSTMENTS" outlined herein is suggested as a convenient method of approach and is not an arbitrary procedure. Variations of the procedure are permitted to obtain the desired final results. The operating controls, located on the front panel, should be set for as good a pattern as possible before making any of the following adjustments.

CENTERING — Place the horizontal centering control, located on the rear apron of the chassis, in the approximate center of the range over which it may be rotated. Rotate the two ring magnets of the centering device around the neck of the picture tube until the picture is properly centered. Each ring magnet is provided with an ear for making this adjustment. The centering device should contact the rear of the deflection yoke. A slight readjustment of the ion trap may be necessary after adjusting the centering device. The horizontal centering control may now be adjusted as required for a fine adjustment of the horizontal picture centering.

HEIGHT CONTROL AND VERTICAL LINEARITY ADJUSTMENT — A test pattern will be required for the proper adjustment of these two controls. The height control has a pronounced effect on the overall picture height and at the same time the adjustment of this control will expand or contract the top of the picture more than the bottom. The vertical linearity control will affect the height somewhat but will have a more pronounced effect on the bottom portion of the picture. The interaction between these two controls makes it necessary to adjust both for proper picture height and vertical linearity.

A.G.C. CONTROL SWITCH — The A.G.C. control switch should be adjusted for the best average performance on all active channels.

With this switch set in the 0-10 MILE position (counterclockwise) maximum AGC voltage is applied to the tuner. The video amplifier will not be overloaded by strong signals.

With this switch set in the OVER 30 MILES position (clockwise) minimum AGC voltage is applied to the tuner. Snow in the picture will be at minimum when the switch is in this position under weak signal or fringe area receiving conditions. If the AGC control switch is left in this position in areas where strong signals are received, poor picture quality will result along with a probable intercarrier buzz in the speaker. In some cases the sync pulses will be clipped and trouble will be encountered which will appear like a loss of sync unless this switch is properly adjusted.

WIDTH CONTROL — The width control should be adjusted until the picture fills the screen horizontally. Rotating this control in the clockwise direction will increase picture width while counterclockwise rotation will decrease picture width.

BRIGHTNESS CONTROL — This control should be adjusted in any given location for the best average picture from the various active channels which may be received.

FOCUS CONTROL — Adjust this control until the fine horizontal lines which make up the picture are clearly visible. Use the lines in the center portion of the picture for this adjustment.

HUM ADJUSTMENT — A small rheostat will be found mounted on the frame of most of the speakers. Adjust this rheostat with a small screw driver for minimum audible hum in the speaker.

HORIZONTAL OSCILLATOR ADJUSTMENT

If the horizontal hold control fails to restore synchronization, the horizontal stabilizer coil (L-108) should be adjusted. Procedure for this adjustment is as follows:

1. Set the horizontal hold control in the approximate center of the range over which it may be rotated.

2. Set the channel selector to an active channel and adjust the horizontal stabilizer for a single steady picture. See Fig. 1.

3. Rotate the horizontal hold control full clockwise. The picture may or may not remain in sync. If it does, momentarily switch the channel selector to another channel and return it to the original channel. The picture should now be slightly out of sync.

4. Rotate the horizontal hold control full counterclockwise. The picture may or may not remain in sync. If it does, momentarily switch the channel selector to another channel and return it to the original channel. The picture should now be slightly out of sync.

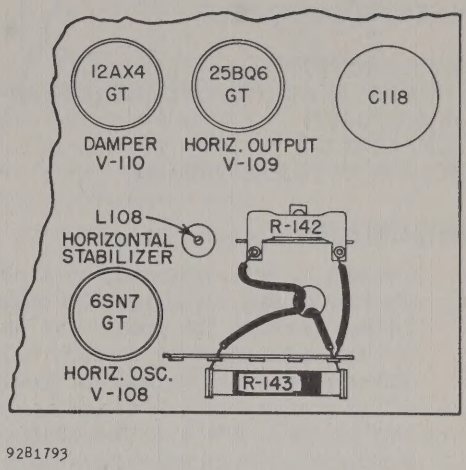


Fig. 1. Horizontal Oscillator Adjustment.

When the horizontal stabilizer coil is properly adjusted the results outlined in steps 3 and 4 will be obtained. If the correct results are not obtained, repeat steps 2, 3 and 4 until they are.

LAYOUT OF CONTROLS

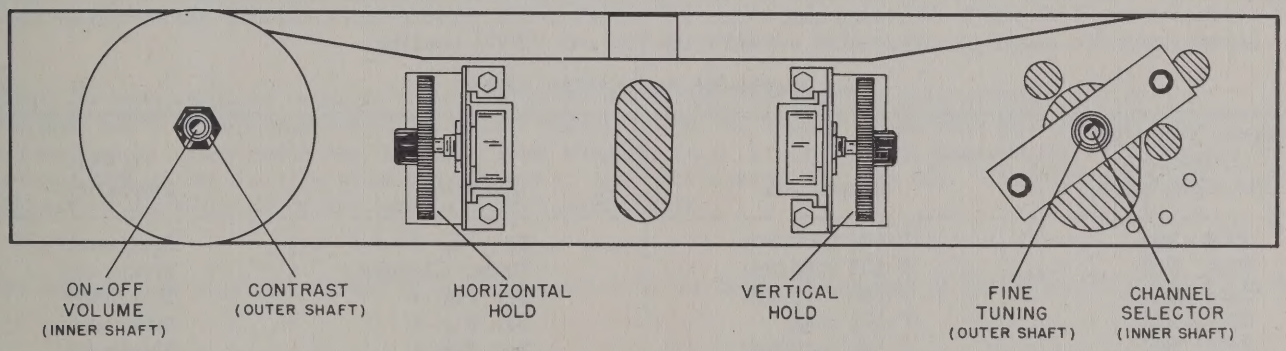


Fig. 2. Front Operating Controls.

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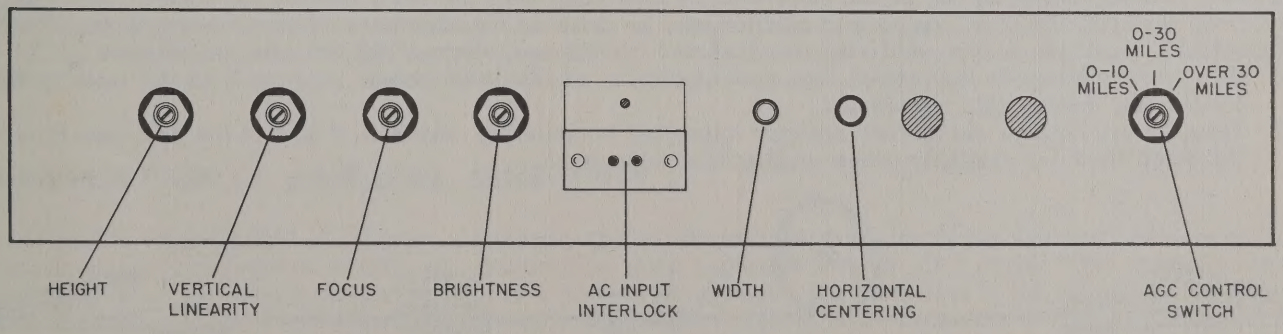


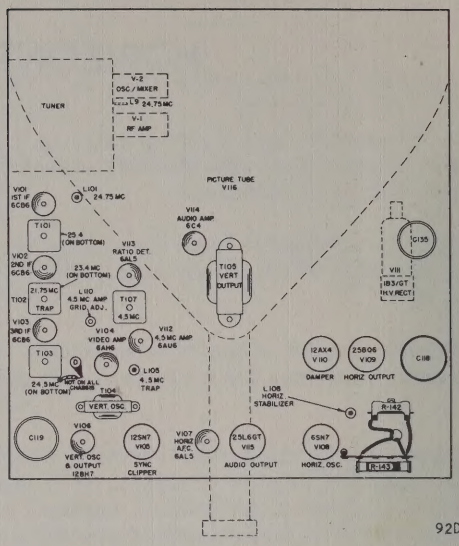
92C1886

Fig. 3. Rear Service Adjustments.

I-F AMPLIFIER ALIGNMENT

EQUIPMENT REQUIRED

SWEEP GENERATOR	RCA type WR-59B or equiv.
MARKER GENERATOR	RCA type WR-39C Television Calibrator or equiv.
OSCILLOSCOPE	RCA type WO-56A or equiv.
VACUUM TUBE VOLTMETER (VTVM)	RCA type WV-97A or equiv.
BIAS SOURCE	3 volt battery
TEST CIRCUIT	Shown in Fig. 5.
ISOLATION TRANSFORMER	150 watt rating or higher



92D1872

Fig. 4. Top Chassis I-F Alignment Points

PROCEDURE

1. Connect all test equipment to a common ground. Connect the TV chassis to this same ground after installing an isolation transformer between the power line and the TV chassis. One side of the line cord connects directly to the TV chassis and an isolation transformer must be used for safety.

2. Set the AVC switch on the rear chassis apron to the 0-10 MILE (counterclockwise) position.

3. Connect the negative side of a 3 volt battery supply to test point Ⓔ . Connect the positive side of the supply to the TV chassis.

4. Connect a VTVM to test point Ⓓ through a 47,000 ohm carbon resistor. Connect the ground side of the meter to the TV chassis.

5. Connect the high side of a marker generator to the shield of the osc./mixer tube. This connection will capacitively couple the generator output to the tube. Make sure the shield is ungrounded by raising it above the grounded clips that hold it in place.

6. Set the channel selector to any vacant channel.

7. Set the marker generator output (unmodulated) for a two volt negative dc reading on the VTVM and adjust the three i-f transformers, L-9, and L-101 according to the I-F AMPLIFIER ALIGNMENT CHART shown below. Readjust the signal generator output as required to maintain the two volt VTVM reading.

I-F AMPLIFIER ALIGNMENT CHART

Signal Generator Frequency (No Modulation)	Adjustment	Location	VTVM Indication
25.4 MC	T-101 (bottom)	See Fig. 4	Maximum
23.4 MC	T-102 (bottom)	Under Chassis	Maximum
24.5 MC	T-103 (bottom)	See Fig. 4	Maximum
21.75 MC	T-102 (top)	See Fig. 4	Minimum
23.4 MC	T-102 (bottom)	See Fig. 4	Maximum
24.75 MC	*L-101	See Fig. 4	Maximum
24.75 MC	#L-9	See Fig. 4	Maximum

IMPORTANT - Avoid resonating any of the coils with the iron core near the outer limit of its travel. The wax in the end of the coil forms holding the iron core in position may be softened for adjustment of the core by means of a heated screwdriver or a small pencil type soldering iron inserted into the wax. Remelt the wax after adjustment.

*NOTE: Temporarily connect the series resistor-capacitor combination shown in Fig. 5 to the tuner test point TP-2 when making this adjustment.

#NOTE: Temporarily connect the series resistor-capacitor combination shown in Fig. 5 to the grid (pin 1) of V-101 the 6CB6 first i-f amplifier when making this adjustment.

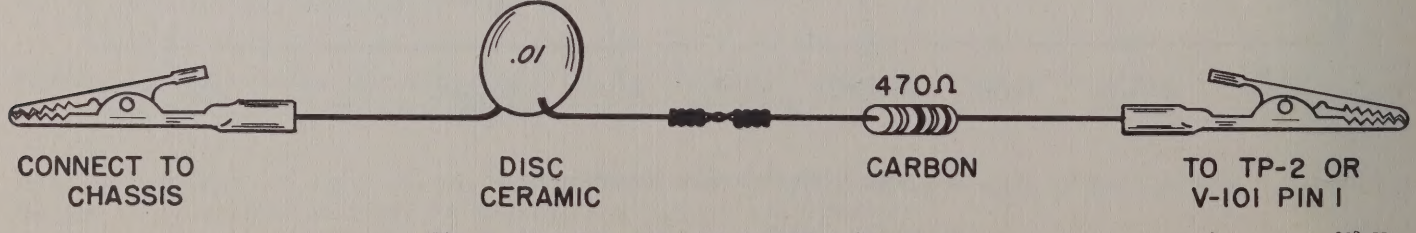


Fig. 5. Test Circuit for I-F Amplifier Alignment

9281771

8. Disconnect the VTVM and marker generator connected in steps 4 and 5. The balance of the set-up should be as directed in steps 1, 2, 3 and 6.

9. Capacitively couple the high side of the sweep generator r-f output to the osc./mixer tube by connecting to the tube shield which has been raised above its grounding clips. The ground side of the sweep generator should be connected to the receiver chassis. Adjust the generator the sweep from 19 to 29 MC.

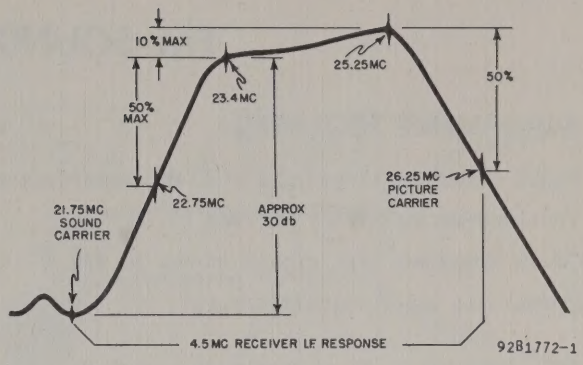


Fig. 6. I-F Amplifier Response

10. Loosely couple the high side of the marker generator to the high side of the sweep generator by clipping the marker generator r-f lead over the insulation of the sweep generator r-f lead. The ground side of the marker generator should be connected to the receiver chassis.

IMPORTANT — To prevent overloading of the i-f amplifier keep the output of the sweep and marker generators as low as possible. The marker generator output should be just high enough to produce visible pips on the pattern. In some cases the 21.75 MC pip will not be visible unless the r-f output of the marker generator is increased to overcome the attenuation of the 21.75 MC signal by the trap in the top of T-102.

11. Connect the sweep output terminals on the sweep generator to the input of the horizontal amplifier in the oscilloscope.

12. Connect one side of a 47,000 ohm $\frac{1}{2}$ watt resistor to test point Ⓓ shown in the schematic diagram. Connect the other end of the resistor to the high side of the input terminals for the vertical amplifier in the oscilloscope. The scope ground terminal connects to the receiver chassis. Keep the scope leads away from the internal chassis wiring, particularly the horizontal input section.

13. Reduce the r-f output of the sweep generator and increase the gain of the vertical amplifier in the oscilloscope as much as possible without introducing an excessive amount of noise on the test pattern. This will prevent overloading of the i-f system.

14. Check the position of the markers shown in Fig. 6. Adjust only the bottom cores of T-101, T-102 and T-103 for a response curve of maximum amplitude with a slightly tilted flat topped appearance as shown in Fig. 6. This tilt is required to compensate for the capacitive coupling used for the signal generators. The actual response obtained will be flat when the observed pattern on the oscilloscope has this tilt. The bottom core of T-103 will primarily control the tilt of this central portion of the curve.

The bottom core of T-101 should be adjusted to position the 26.25 MC marker in the 50% position shown in Fig. 6.

The bottom core of T-102 should be adjusted to determine the slope of the curve between 21.75 MC and 23.4 MC with the 22.75 MC marker down 50% on the curve as shown in Fig. 6.

Under no circumstances should an attempt be made to adjust L-9, L-101 and the 21.75 MC trap in the top of T-102 by means of an oscilloscope and sweep generator. Maladjustment of these coils does not give a noticeable indication on the oscilloscope. Align these coils by following the procedure given in steps 1 through 7 only.

MEASUREMENT OF I-F AMPLIFIER, SENSITIVITY

To determine the i-f amplifier sensitivity, disconnect the r-f output lead from the tuner where it connects to L-101. Temporarily connect one side of a .005 mfd. ceramic or mica capacitor to grid pin 1 of the 6CB6 first i-f amplifier tube V-101. Connect the unmodulated r-f output of a marker generator to the other side of the capacitor and the ground side of the generator to the TV chassis. Set the marker generator to 24.75 MC. Connect a VTVM as directed in step 4 of the alignment procedure. The three volt battery must be removed. If a generator output of 200 to 400 microvolts produces a 1 volt reading on the VTVM, the i-f amplifier sensitivity is normal.

FM SOUND CHANNEL ALIGNMENT

EQUIPMENT REQUIRED

Signal generator covering 4 to 30 mc. unmodulated.

Vacuum tube voltmeter (VTVM).

Sound alignment test circuit shown in Fig. 7.

Power line isolation transformer.

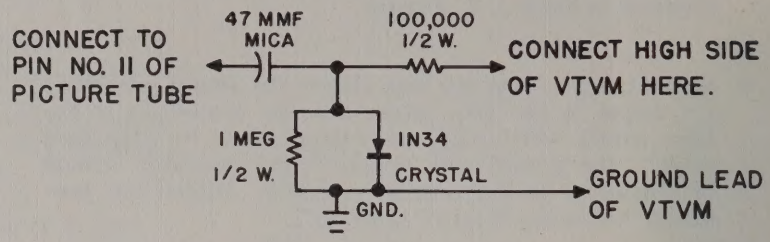


Fig. 7. Sound Alignment Test Circuit 92A1116-B

PROCEDURE

1. Connect all test equipment to a common ground. Connect the TV chassis to this same ground after installing an isolation transformer between the power line and the TV chassis. One side of the line cord connects directly to the TV chassis and an isolation transformer must be used for safety.

2. Set the channel selector to any vacant channel.

3. Connect the signal generator output through a .005 mfd. capacitor to test point Ⓔ shown in the schematic diagram. Ground the shield of the generator output cable to the TV chassis.

4. Connect the sound alignment detector circuit and VTVM as shown in Fig. 7. Adjust the 4.5 mc. generator output (unmodulated) to give a 1 volt reading on the VTVM.

5. Adjust the 4.5 mc. trap adjustment (L-105) at 4.5 mc. for a minimum VTVM reading.

6. Disconnect the test circuit and connect the VTVM to test terminal Ⓑ (Pin 2 of FM detector, V-113). See schematic diagram.

7. Adjust the 4.5 mc. amplifier grid adjustment (L-110) and the primary of T-107 (bottom core) at 4.5 mc. for a maximum VTVM reading.

8. Connect the VTVM to test terminal Ⓒ, shown in the schematic diagram. Adjust the secondary of T-107 (top core) at 4.5 mc. for the zero reading which occurs between the positive and negative peaks. If the zero reading occurs at more than one setting, use the position nearest the top limit of the core.

9. Shift the signal generator an equal amount on either side of 4.5 mc. and touch up the primary of T-107 (bottom core) for approximately equal peaks. Use just enough signal output to obtain one volt peaks for best results.

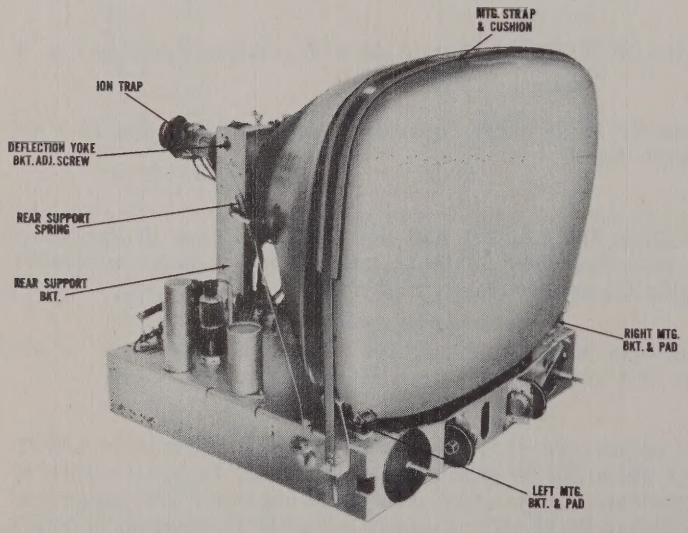


Fig. 8. Front View Pix Tube Mounting 92X1887

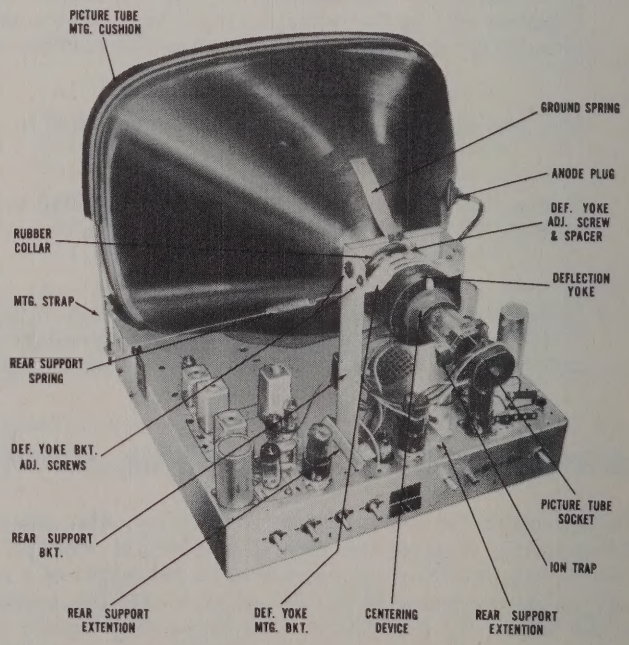


Fig. 9. Rear View Pix Tube Mounting 92X1888

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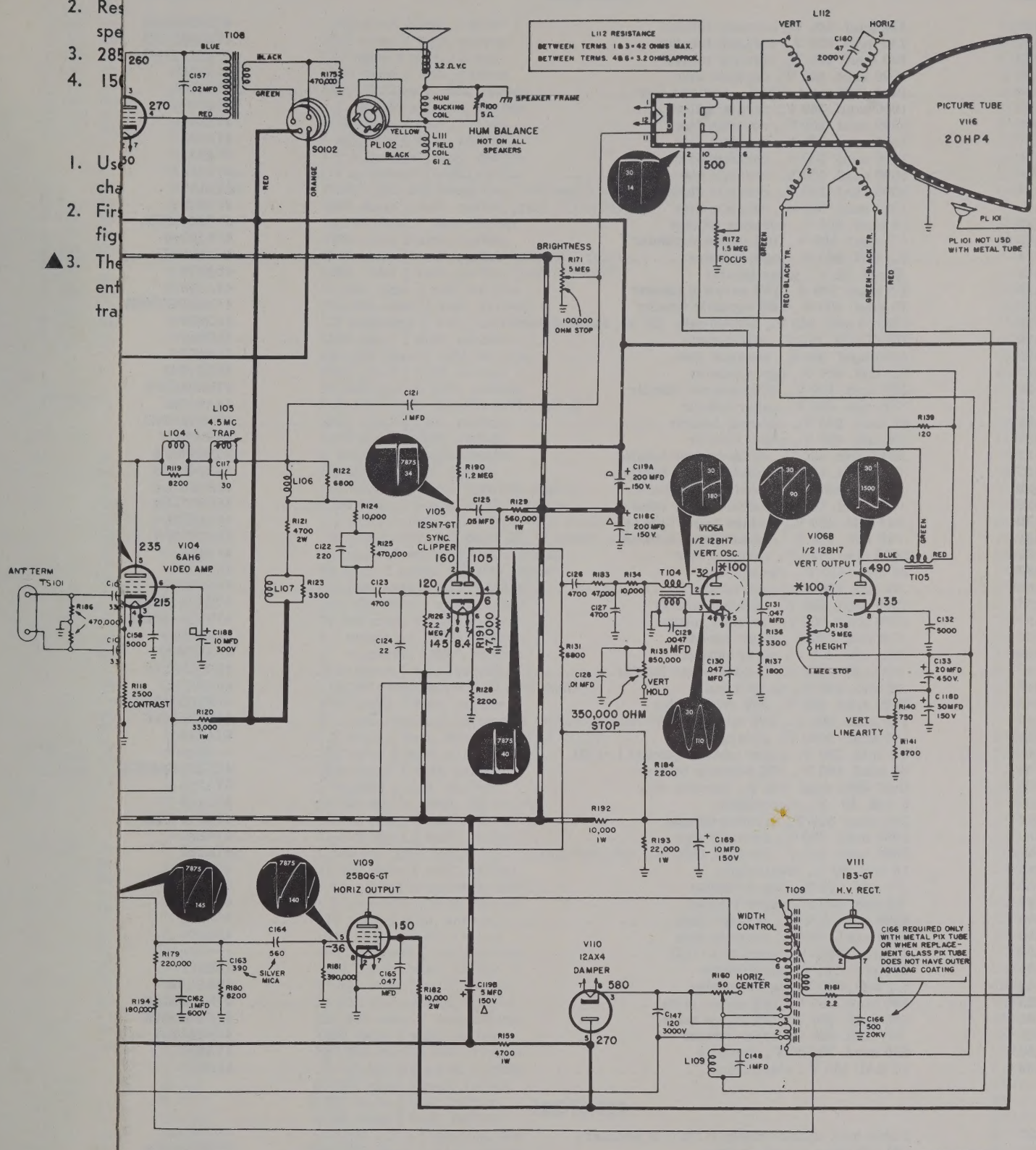


92X1895-1

20" A1300D CHASSIS SCHEMATIC DIAGRAM

FM SOUND CHANNEL ALIGNMENT

EQUIPMENT REQUIRED

Signal generator covering 4 to 30 mc. unmodulated.

Vacuum tube voltmeter (VTVM).

Sound alignment test circuit shown in Fig. 7.

Power line isolation transformer.

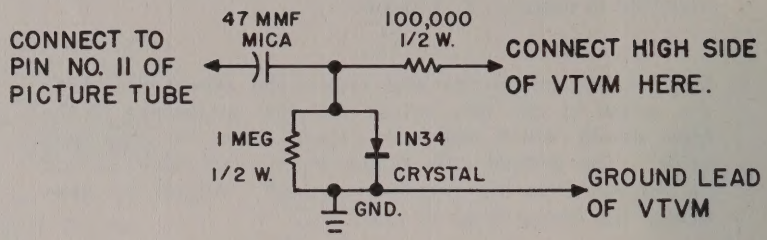


Fig. 7. Sound Alignment Test Circuit 92A1116-8

PROCEDURE

1. Connect all test equipment to a common ground. Connect the TV chassis to this same ground after installing an isolation transformer between the power line and the TV chassis. One side of the line cord connects directly to the TV chassis and an isolation transformer must be used for safety.

2. Set the channel selector to any vacant channel.

3. Connect the signal generator output through a .005 mfd. capacitor to test point Ⓔ shown in the schematic diagram. Ground the shield of the generator output cable to the TV chassis.

4. Connect the sound alignment detector circuit and VTVM as shown in Fig. 7. Adjust the 4.5 mc. generator output (unmodulated) to give a 1 volt reading on the VTVM.

5. Adjust the 4.5 mc. trap adjustment (L-105) at 4.5 mc. for a minimum VTVM reading.

6. Disconnect the test circuit and connect the VTVM to test terminal Ⓑ (Pin 2 of FM detector, V-113). See schematic diagram.

7. Adjust the 4.5 mc. amplifier grid adjustment (L-110) and the primary of T-107 (bottom core) at 4.5 mc. for a maximum VTVM reading.

8. Connect the VTVM to test terminal Ⓒ, shown in the schematic diagram. Adjust the secondary of T-107 (top core) at 4.5 mc. for the zero reading which occurs between the positive and negative peaks. If the zero reading occurs at more than one setting, use the position nearest the top limit of the core.

9. Shift the signal generator an equal amount on either side of 4.5 mc. and touch up the primary of T-107 (bottom core) for approximately equal peaks. Use just enough signal output to obtain one volt peaks for best results.

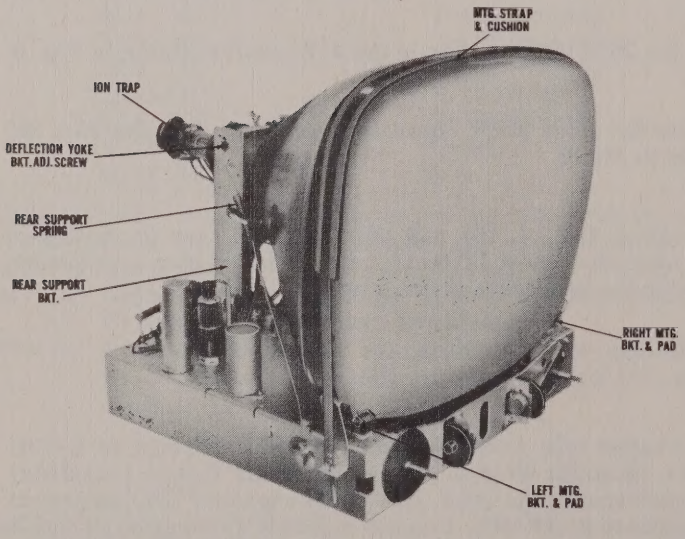


Fig. 8. Front View Pix Tube Mounting 92X1887

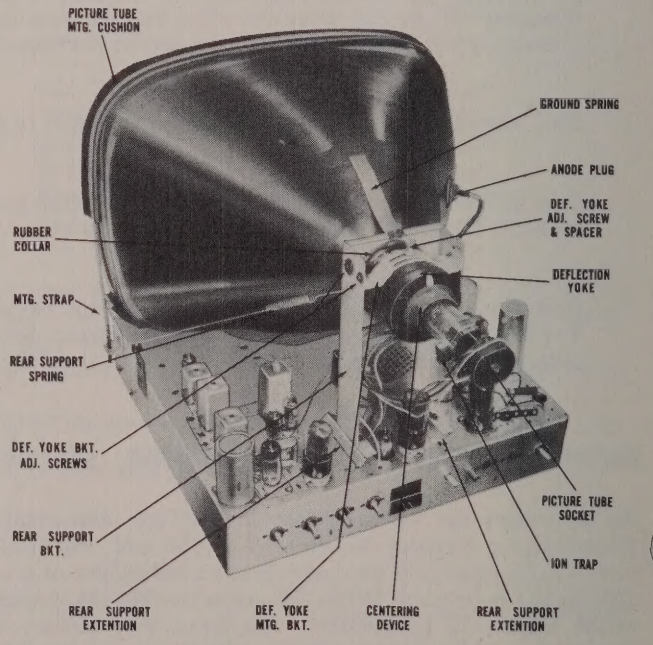


Fig. 9. Rear View Pix Tube Mounting 92X1888

NOTES

SCHEMATIC

1. Capacitor values in MMF unless otherwise specified.
2. Resistor values in ohms and are 1/2 watt unless otherwise specified.
3. 285 volt B+ leads in heavy solid lines.
4. 150 volt B+ leads in heavy broken lines.

SCOPE TRACINGS

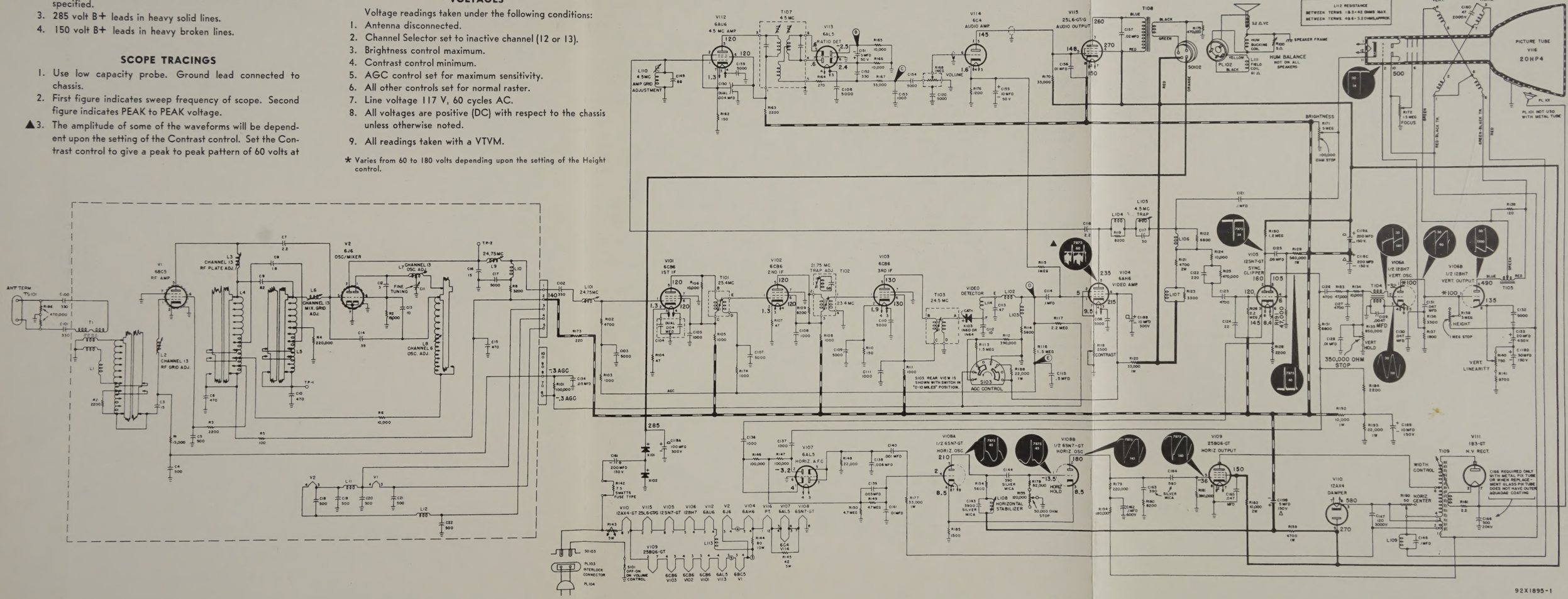
1. Use low capacity probe. Ground lead connected to chassis.
2. First figure indicates sweep frequency of scope. Second figure indicates PEAK to PEAK voltage.
3. ▲ The amplitude of some of the waveforms will be dependent upon the setting of the Contrast control. Set the Contrast control to give a peak to peak pattern of 60 volts at plate pin number 5 of V-104, the video amplifier, before observing the other waveforms.

VOLTAGES

Voltage readings taken under the following conditions:

1. Antenna disconnected.
2. Channel Selector set to inactive channel (12 or 13).
3. Brightness control maximum.
4. Contrast control minimum.
5. AGC control set for maximum sensitivity.
6. All other controls set for normal raster.
7. Line voltage 117 V, 60 cycles AC.
8. All voltages are positive (DC) with respect to the chassis unless otherwise noted.
9. All readings taken with a VTVM.

★ Varies from 60 to 180 volts depending upon the setting of the Height control.



VALUES AND TOLERANCES SHOWN ARE NOMINAL AND VARIATIONS MAY BE FOUND. IT IS RECOMMENDED THAT THE VALUE OF ANY REPLACEMENT CORRESPOND TO THE NOMINAL VALUE OF THE PART BEING REPLACED.

20" A1300D CHASSIS
SCHEMATIC DIAGRAM

SERVICE PARTS LIST (Cont.)

TRANSFORMERS AND COILS

T-101	Transformer, first i-f amplifier	50B561
T-102	Transformer, second i-f amplifier	50B568
T-103	Transformer, diode detector	50B562
T-104	Transformer, vertical blocking oscillator	55B190
T-105	Transformer, vertical output	55C192
T-107	Transformer, ratio detector	50C473
T-108	Transformer, audio output	55C191
T-109	Transformer, horizontal output	55D197
L-101	Coil, converter i-f	51B1301
L-102	Coil, video peaking	51A1578
L-103	Coil, video peaking	51A1579
L-104	Coil, video peaking (wound on R-119)	51A1580
L-105	Coil, 4.5 MC trap	51B1541
L-106	Coil, video peaking (wound on R-122)	51A1581
L-107	Coil, video peaking (wound on R-123)	51A1582
L-108	Coil, horizontal stabilizer	51B1642
L-109	Coil, yoke coupling (wound on C-148)	53B264
L-110	Coil, 4.5 MC amplifier grid adjustment	51B1542
L-111	Coil, speaker field (part of speaker)	---------
L-112	Deflection yoke	53A271
L-113	Choke, heater	53A266
L-114	Choke, r-f (channel 5 tweet filter)	53B008

TUBE & RECTIFIER COMPLEMENT

V-1	R-F amplifier (part of tv tuner)	--------
V-2	Oscillator/mixer (part of tv tuner)	---------
V-101	First i-f amplifier	90X6CB6
V-102	Second i-f amplifier	90X6CB6
V-103	Third i-f amplifier	90X6CB6
V-104	Video amplifier	90X6AH6
V-105	Sync clipper	90X12SN7GT
V-106	Vertical oscillator and output	90X12BH7
V-107	Horizontal A.F.C.	90X6AL5
V-108	Horizontal oscillator	90X6SN7GT
V-109	Horizontal output	90X25BQ6GT
V-110	Damper	90X12AX4
V-111	High voltage rectifier	90X1B3GT
V-112	Sound i-f amplifier (4.5 MC)	90X6AU6
V-113	Ratio detector	90X6AL5
V-114	Audio amplifier	90X6C4
V-115	Audio output amplifier	90X25L6GT/G
V-116	Picture tube	90X20HP4
X-101	Selenium rectifier (300 ma.)	27A173
X-102	Selenium rectifier (300 ma.)	27A173
X-103	Video detector (1N60 germanium diode)	19B1246

TV TUNER UNIT

Tuning unit assembly, complete with tubes. Pentode type tuner with 90X6BC5 r-f amplifier and 90X6J6 osc./mixer	1E1492

MISCELLANEOUS PARTS FOR TV CHASSIS

	Bearing, tuner shaft	8B2029
	Bearing, width control shaft	8A1810
	Cap and lead; horiz. output plate	87A3590
	Centering device	21B138
	Clip, antenna lead	76A976
	Cord assembly with PL-103 & PL-104	87A1668-1
	Coupling, width control shaft; plastic	29A195
	Grommet, rubber	16A296
	Insulator block, chassis mtg.	78B860
	Insulator, interlock; mtg. for SO-103	8A1811
	Insulator, 3 1/8" diam.; for vol./cont. control	8B2020
	Ion trap	21A146
	Knob, mahogany; AGC control switch	15A562
	Knob, horiz. & vert. hold controls	15C552
	Plate, control mtg.; fiber	8A1790
	Plate, elect. cap. mtg.; 4 prong, 1-13/16" mtg. centers	8A749
	Plate, mounting; horizontal stabilizer coil	63A902
	Plate, shock mounting; V-106	63A821
SO-102	Plug, speaker; with leads	6A442
PL-103	Plug, interlock; part of line cord assembly	--------
PL-104	Plug, wall outlet; part of line cord assembly	--------
	Plug, two prong; R-142 mtg.	88A851
	Socket, two prong; R-142 mtg.	10A499
	Shield, miniature tube; V-102 & V-103	69A232
	Shaft, width control adj.; 1/4" diameter	74A558
	Shaft retaining ring; 1/4"	76A775
	Shaft, horiz. centering control; 3/8" with key	74B559
	Shaft retaining ring; 3/8"	76A968
SO-103	Socket, interlock; chassis mtg., male	10A498
	Socket, 7 pin wafer; 1-5/16" mtg. centers	6B314
	Socket, 7 pin wafer; 1" mtg. centers	6A340
	Socket, 7 pin wafer with dummy lug; 1" mtg. centers	6B434
	Socket, octal molded; shock mount for V-108	6A432
	Socket, octal molded; 1-5/16" mtg. centers	6A436
	Socket, octal molded; 1-1/2" mtg., pins 1 & 4 deleted	6A440
	Socket, 9 pin molded mica filled; 1-1/8" mtg. centers	6A433
	Spring, control shaft; horiz. centering control	75A259
S-101	Switch, off-on; part of volume/contrast control	--------
S-103	Switch, AGC control	60B507
TS-101	Terminal strip, antenna	88B456
	Washer, extruded fiber; 3/8" ID	4A602

PICTURE TUBE MOUNTING COMPONENTS

V-116	Picture tube	90X20HP4
	Bracket, deflection yoke mtg.	67C1244
	Bracket, left front pix tube support	67C2135
	Bracket, right front pix tube support	67C2136
	Bracket, rear pix tube and yoke support	67A2137
	Bracket, left extension for above	67C2080
	Bracket, right extension for above	67C2081
	Centering device	21B138
	Collar, picture tube mtg.; rubber	16A295
	Cushion, pix tube mtg.; sponge rubber	16A329
	Deflection yoke	53A271
	Ground and shield, pix tube; metalized paper	69C506
	Hook, pix tube ground and shield	76A967
	Ion trap	21A146
	Keeper, pix tube anode	8A1375
	Pad, pix tube mtg.; 3/4" rubber channel	16A297
	Pad, stop; rubber	16B326
PL-101	Plug, pix tube anode	10A377
	Screw, deflection yoke adj.	3A1610
	Socket assembly, pix tube	6A465
	Spacer, deflection yoke adj. screw	73A580
	Spring, anode keeper; 1 1/2" long	75A202
	Spring, anode keeper; 3 1/4" long	75A203
	Spring, pix tube ground and shield	75A257
	Spring, pix tube ground	75B246
	Spring, pix tube rear support	75A272
	Strap, pix tube mtg.; with end brackets	76B1046

CABINET PARTS

Antenna, silver vortex	57A176
Antenna terminal strip	88A456
Bolt, ornamental head; speaker mounting	3B1790
Bracket, glass & mask retainer; top and bottom	67A2138
Bracket, glass & mask retainer; left side	67A2139
Bracket, glass & mask retainer; right side	67A2140
Bracket, cabinet back upper corner support	67B2009
Cabinet, table plastic	116F027
Cabinet back only	8-2082
Cabinet foot	16A315
Escutcheon, knob	7D428
Glass, safety	22A371
Grille, speaker	7C424
Knob, channel selector	15C579
Knob, contrast control	15C517
Knob, fine tuning	15C492
Knob, off-on-volume control	15C577
Line cord and plugs	87B1668-1
Mask, picture tube	7E427
Medallion "H"	7B384
Medallion mounting clip	76A415
Plug speaker, with leads	6A442
Shield, picture tube; mounted on cabinet back	69A572
Speaker, 6½" electrodynamic; 61 ohms field (cold resistance)	85C135
Screw, plastic; for mounting cabinet back, safety glass and mask	3A266

SERVICE PARTS LIST

CAPACITORS

Symbol	Description	Part Number
C-100	330 mmf. 500 V., ceramic tubular	47B20331M5
C-101	330 mmf. 500 V., ceramic tubular	47B20331M5
C-102	330 mmf. 500 V., ceramic tubular	47B20331M5
C-103	5000 mmf. 500 V., ceramic disc	47A168
C-104	Dual 4000 mmf. 500 V., ceramic disc	47A218
C-105	1000 mmf. 500 V., ceramic disc	47A230
C-106	5000 mmf. 500 V., ceramic disc	47A168
C-107	5000 mmf. 500 V., ceramic disc	47A168
C-108	1000 mmf. 500 V., ceramic disc	47A230
C-109	5000 mmf. 500 V., ceramic disc	47A168
C-110	5000 mmf. 500 V., ceramic disc	47A168
C-111	1000 mmf. 500 V., ceramic disc	47A230
C-112	10 mmf. 500 V., ceramic tubular	47B20100K5
*C-113	4.7 mmf. 500 V., 10% ceramic tubular	47A160-6
C-114	0.1 mfd. 200 V., paper tubular	46AU104J
C-115	.5 mfd. 25 V., paper tubular	46A177
*C-116	2.2 mmf. 500 V., 10% ceramic tubular	47A160-4
*C-117	30 mmf. 500 V., 10% ceramic tubular	47X20PG300K5
C-118	100-10 mfd. 300 V., 200-30 mfd. 150 V., electrolytic	45C209
C-119	200-5 mfd. 150 V., electrolytic	45C210
C-120	5000 mmf. 500 V., ceramic disc	47A168
C-121	0.1 mfd. 400 V., paper tubular	46AV104J
*C-122	220 mmf. 500 V., 10% ceramic tubular	47B20221K5
C-123	.005 mfd. 600 V., paper tubular	46AY502J
C-124	22 mmf. 500 V., ceramic tubular	47B20220M5
C-125	.05 mfd. 400 V., paper tubular	46AW503J
C-126	.0047 mfd. 400 V., molded paper tubular	46BS472L4
C-127	.0047 mfd. 400 V., molded paper tubular	46BS472L4
C-128	.01 mfd. 400 V., molded paper tubular	46BS103L4
C-129	.0047 mfd. 400 V., molded paper tubular	46BS472L4
C-130	.047 mfd. 400 V., molded paper tubular	46BS473L4
C-131	.047 mfd. 400 V., molded paper tubular	46BS473L4
C-132	5000 mmf. 500 V., ceramic disc	47A168
C-133	20 mfd. 450 V., electrolytic	45B208
C-134	.05 mfd. 200 V., paper tubular	46AU503J
C-136	1000 mmf. 500 V., ceramic tubular	47B20A102M5
C-137	1000 mmf. 500 V., ceramic tubular	47B20A102M5
C-138	.006 mfd. 600 V., paper tubular	46AZ602F
*C-139	.003 mfd. 400 V., paper tubular	46AW302J
*C-140	.001 mfd. 1000 V., molded paper tubular	46BS102L10
C-141	.01 mfd. 400 V., paper tubular	46AW103J
*C-143	3900 mmf. 500 V., 10% silver mica	47X30D392K
*C-144	390 mmf. 500 V., 10% silver mica	47X20D391K
*C-147	120 mmf. 3000 V., ceramic disc	47A296
C-148	0.1 mfd. 200 V., paper tubular (part of L-109)	---------
*C-149	68 mmf. 500 V., 10% ceramic tubular	47X20TH680K5
C-150	Dual 4000 mmf. 500 V., ceramic disc	47A218
C-151	5 mfd. 50 V., electrolytic	45B175
C-152	330 mmf. 500 V., ceramic tubular	47B20331M5
C-153	1000 mmf. 500 V., ceramic disc	47A230
C-154	5000 mmf. 500 V., ceramic disc	47A168
C-155	10 mfd. 50 V., electrolytic	45B211
C-156	.01 mfd. 400 V., paper tubular	46AW103J
C-157	.02 mfd. 600 V., paper tubular	46AY203J
C-158	5000 mmf. 500 V., ceramic disc	46A168
C-159	5000 mmf. 500 V., ceramic disc	46A168
C-160	47 mmf. 2000 V., (part of L-112)	---------
*C-161	200 mfd. 150 V., electrolytic	45B217
C-162	0.1 mfd. 600 V., paper tubular	46AY104J
*C-163	390 mmf. 500 V., 10% silver mica	47X20D391K
*C-164	560 mmf. 500 V., 10% silver mica	47X20D561K
C-165	.047 mfd. 400 V., paper tubular	47BS473L4
C-166	500 mmf. 20,000 V., ceramic	47A308
C-169	10 mfd. 150 V., electrolytic	45A097

RESISTORS

R-100	5 ohm hum balance rheostat (part of speaker)	---------
R-101	100,000 ohms ½ watt, carbon	23X20X104K
R-102	4700 ohm ½ watt, carbon	23X20X472K
R-103	1000 ohms ½ watt, carbon	23X20X102K
R-104	47 ohms ½ watt, carbon	23X20X470K
R-105	1000 ohms ½ watt, carbon	23X20X102K
R-106	10,000 ohms ½ watt, carbon	23X20X103K
R-107	47 ohms ½ watt, carbon	23X20X470K

* USE EXACT REPLACEMENT PART ONLY

RESISTORS (Cont.)

Symbol	Description	Part Number
R-108	1000 ohms ½ watt, carbon	23X20X102K
R-109	8200 ohms ½ watt, carbon	23X20X822K
R-110	150 ohms ½ watt, carbon	23X20X151K
R-111	1000 ohms ½ watt, carbon	23X20X102K
R-112	390,000 ohms ½ watt, carbon	23X20X394K
R-113	1.5 megohms ½ watt, carbon	23X20X155K
R-114	5600 ohms ½ watt, carbon	23X20X562K
R-115	1 megohm ½ watt, carbon	23X20X105K
R-116	1.5 megohms ½ watt, carbon	23X20X155K
R-117	2.2 megohms ½ watt, carbon	23X20X225K
R-118/168	2500/1,000,000 ohms; dual contrast/volume control	25B997
R-119	8200 ohms ½ watt, carbon (part of L-104)	---------
R-120	33,000 ohms 1 watt, carbon	23X30X333K
R-121	4700 ohms 2 watt, carbon	23X40X472K
R-122	6800 ohms ½ watt, carbon (part of L-106)	---------
R-123	3300 ohms ½ watt, carbon (part of L-107)	---------
R-124	10,000 ohms ½ watt, carbon	23X20X103K
R-125	470,000 ohms ½ watt, carbon	23X20X474K
R-126	2.2 megohms ½ watt, carbon	23X20X225K
R-128	2200 ohms ½ watt, carbon	23X20X222K
R-129	560,000 ohms 1 watt, carbon	23X30X564K
R-131	6800 ohms ½ watt, carbon	23X20X682K
R-134	10,000 ohms ½ watt, carbon	23X20X103K
R-135	850,000 ohms; vertical hold control	25B1013
R-136	3300 ohms ½ watt, carbon	23X20X332K
R-137	1800 ohms ½ watt, carbon	23X20X182K
R-138	5 megohms; height control	25B998
R-139	120 ohms ½ watt, carbon	23X20X121K
R-140	750 ohms; vertical linearity control	25B999
*R-141	8700 ohms 3 watts, 5% wire wound	24A971
*R-142	7.5 ohms 5 watts, fuse type wire wound	25B1004
*R-143	190 ohms cold - 19 ohms hot, 5 watts; neg. temp. coeff.	25A1008
*R-144	80 ohms 10 watts, 5% wire wound	24A955
*R-145	42 ohms 3 watts, 5% wire wound	24A957
R-146	100,000 ohms ½ watt, carbon	23X20X104K
R-147	100,000 ohms ½ watt, carbon	23X20X104K
R-148	22,000 ohms ½ watt, carbon	23X20X223K
R-149	4.7 megohms ½ watt, carbon	23X20X475K
R-150	4.7 megohms ½ watt, carbon	23X20X475K
R-154	5600 ohms ½ watt, carbon	23X20X562K
R-155	120,000 ohms; horizontal hold control	25B1014
R-159	4700 ohms 1 watt, carbon	23X30X472K
R-160	50 ohms rheostat; horizontal centering (part of T-106)	---------
R-161	2.2 ohms ½ watt, carbon (part of T-106)	23X20X022K
R-162	150 ohms ½ watt, carbon	23X20X151K
R-163	2200 ohms ½ watt, carbon	23X20X222K
R-164	270 ohms ½ watt, carbon	23X20X271K
*R-165	10,000 ohms ½ watt, 5% carbon	23X20X103J
*R-166	10,000 ohms ½ watt, 5% carbon	23X20X103J
R-167	33,000 ohms ½ watt, carbon	23X20X333K
R-168/118	1,000,000/2500 ohms; dual volume/contrast control	25B997
R-170	33,000 ohms ½ watt, carbon	23X20X333K
R-171	5 megohms; brightness control	25B1000
R-172	1.5 megohms; focus control	25A1003
R-173	220 ohms ½ watt, carbon	23X20X221K
R-174	1000 ohms ½ watt, carbon	23X20X102K
R-175	470,000 ohms ½ watt, carbon	23X20X474K
R-176	1200 ohms ½ watt, carbon	23X20X122K
R-177	33,000 ohms 1 watt, carbon	23X30X333K
R-178	82,000 ohms ½ watt, carbon	23X20X823K
R-179	220,000 ohms ½ watt, carbon	23X20X224K
R-180	8200 ohms ½ watt, carbon	23X20X822K
R-181	390,000 ohms ½ watt, carbon	23X20X394K
R-182	10,000 ohms 2 watts, carbon	23X40X103K
R-183	47,000 ohms ½ watt, carbon	23X20X473K
R-184	2200 ohms ½ watt, carbon	23X20X222K
R-185	1500 ohms ½ watt, carbon	23X20X152K
R-186	470,000 ohms ½ watt, carbon	23X20X474K
R-187	470,000 ohms ½ watt, carbon	23X20X474K
R-188	22,000 ohms 1 watt, carbon	23X30X223K
R-190	1.2 megohms ½ watt, carbon	23X20X125K
R-191	47,000 ohms ½ watt, carbon	23X20X473K
R-192	10,000 ohms 1 watt, carbon	23X30X103K
R-193	22,000 ohms 1 watt, carbon	23X30X223K
R-194	180,000 ohms ½ watt, carbon	23X20X184K

* USE EXACT REPLACEMENT PART ONLY

SERVICE PARTS LIST (Cont.)

TRANSFORMERS AND COILS

T-101	Transformer, first i-f amplifier	50B561
T-102	Transformer, second i-f amplifier	50B568
T-103	Transformer, diode detector	50B562
T-104	Transformer, vertical blocking oscillator	55B190
T-105	Transformer, vertical output	55C192
T-107	Transformer, ratio detector	50C473
T-108	Transformer, audio output	55C191
T-109	Transformer, horizontal output	55D197
L-101	Coil, converter i-f	51B1301
L-102	Coil, video peaking	51A1578
L-103	Coil, video peaking	51A1579
L-104	Coil, video peaking (wound on R-119)	51A1580
L-105	Coil, 4.5 MC trap	51B1541
L-106	Coil, video peaking (wound on R-122)	51A1581
L-107	Coil, video peaking (wound on R-123)	51A1582
L-108	Coil, horizontal stabilizer	51B1642
L-109	Coil, yoke coupling (wound on C-148)	53B264
L-110	Coil, 4.5 MC amplifier grid adjustment	51B1542
L-111	Coil, speaker field (part of speaker)	---------
L-112	Deflection yoke	53A271
L-113	Choke, heater	53A266
L-114	Choke, r-f (channel 5 tweet filter)	53B008

TUBE & RECTIFIER COMPLEMENT

V-1	R-F amplifier (part of tv tuner)	--------
V-2	Oscillator/mixer (part of tv tuner)	--------
V-101	First i-f amplifier	90X6CB6
V-102	Second i-f amplifier	90X6CB6
V-103	Third i-f amplifier	90X6CB6
V-104	Video amplifier	90X6AH6
V-105	Sync clipper	90X12SN7GT
V-106	Vertical oscillator and output	90X12BH7
V-107	Horizontal A.F.C.	90X6AL5
V-108	Horizontal oscillator	90X6SN7GT
V-109	Horizontal output	90X25BQ6GT
V-110	Damper	90X12AX4
V-111	High voltage rectifier	90X1B3GT
V-112	Sound i-f amplifier (4.5 MC)	90X6AU6
V-113	Ratio detector	90X6AL5
V-114	Audio amplifier	90X6C4
V-115	Audio output amplifier	90X25L6GT/G
V-116	Picture tube	90X20HP4
X-101	Selenium rectifier (300 ma.)	27A173
X-102	Selenium rectifier (300 ma.)	27A173
X-103	Video detector (1N60 germanium diode)	19B1246

TV TUNER UNIT

Tuning unit assembly, complete with tubes. Pentode type tuner with 90X6BC5 r-f amplifier and 90X6J6 osc./mixer	1E1492

MISCELLANEOUS PARTS FOR TV CHASSIS

	Bearing, tuner shaft	8B2029
	Bearing, width control shaft	8A1810
	Cap and lead; horiz. output plate	87A3590
	Centering device	21B138
	Clip, antenna lead	76A976
	Cord assembly with PL-103 & PL-104	87A1668-1
	Coupling, width control shaft; plastic	29A195
	Grommet, rubber	16A296
	Insulator block, chassis mtg.	78B860
	Insulator, interlock; mtg. for SO-103	8A1811
	Insulator, 3 1/8" diam.; for vol./cont. control	8B2020
	Ion trap	21A146
	Knob, mahogany; AGC control switch	15A562
	Knob, horiz. & vert. hold controls	15C552
	Plate, control mtg.; fiber	8A1790
	Plate, elect. cap. mtg.; 4 prong, 1-13/16" mtg. centers	8A749
	Plate, mounting; horizontal stabilizer coil	63A902
	Plate, shock mounting; V-106	63A821
SO-102	Plug, speaker; with leads	6A442
PL-103	Plug, interlock; part of line cord assembly	--------
PL-104	Plug, wall outlet; part of line cord assembly	--------
	Plug, two prong; R-142 mtg.	88A851
	Socket, two prong; R-142 mtg.	10A499
	Shield, miniature tube; V-102 & V-103	69A232
	Shaft, width control adj.; 1/4" diameter	74A558
	Shaft retaining ring; 1/4"	76A775
	Shaft, horiz. centering control; 3/8" with key	74B559
	Shaft retaining ring; 3/8"	76A968
SO-103	Socket, interlock; chassis mtg., male	10A498
	Socket, 7 pin wafer; 1-5/16" mtg. centers	6B314
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Cabinet foot	16A315
Escutcheon, knob	7D428
Glass, safety	22A371
Grille, speaker	7C424
Knob, channel selector	15C579
Knob, contrast control	15C517
Knob, fine tuning	15C492
Knob, off-on-volume control	15C577
Line cord and plugs	87B1668-1
Mask, picture tube	7E427
Medallion "H"	7B384
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Shield, picture tube; mounted on cabinet back	69A572
Speaker, 6½" electrodynamic; 61 ohms field (cold resistance)	85C135
Screw, plastic; for mounting cabinet back, safety glass and mask	3A266

hallicrafters

MANUFACTURERS OF RADIO AND ELECTRONIC EQUIPMENT, CHICAGO 24, U.S.A.